



**Galena Mining Limited**

**Operations  
and guidance update  
20 April 2023**



Abra mine site



Abra village

*"We acknowledge the Nharnewangga Wajarri and Ngarlawangga peoples, past, present and emerging who are the Traditional Custodians of the land on which the Abra Project is located"*



# Disclaimer

**Forward looking statements** - The contents of this presentation reflect various technical and economic conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly over relatively short periods of time. Consequently, actual results may vary from those in this presentation.

Some statements in this presentation regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward-looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "Scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions.

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The Company believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any production targets and financial estimates, based on the information contained in this announcement. Reference is made to the Abra Base Metals Mine ("Abra" or the "Project") Feasibility Study ("FS") (ASX: 22 July 2019), Updated Mine Plan (ASX: 25 July 2022) and Revised Production Guidance (ASX: 11 April 2023). A summary of the FS and Updated Mine Plan material assumptions was published by Galena Mining Limited ("Galena") on the 22 July 2019 and 25 July 2022 respectively. All material assumptions underpinning the production target, or the forecast financial information continue to apply and have not materially changed.

**Competent Person's statement** - The information in this report related to the Abra Ore Reserve is based on work completed by Mr Roger Bryant, BEng (Mining, Member AUSIMM). Mr Bryant was an employee of Galena Mining Ltd at the time the Ore Reserve was prepared. Mr Bryant has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Bryant consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this report related to the Abra April 2021 Resource and underpinning the production target is based on work completed by Mr Angelo Scopel BSc (Geol), MAIG, a fulltime employee of Galena Mining and Mr Mark Drabble B.App.Sci. (Geology), MAIG, MAusIMM, Principal Consultant at Optiro Pty Ltd. Mr Scopel was responsible for data review and QAQC, and Mr Drabble was responsible for the development of the geological model, resource estimation, classification and reporting. Mr Scopel and Mr Drabble have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Scopel and Mr Drabble consent to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this report to which this statement is attached that relates to exploration results and drilling data is based upon information compiled by Mr Angelo Scopel BSc (Geol), MAIG, a fulltime employee of Galena Mining. Mr Scopel has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Scopel consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

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## Section 1

# Investment Opportunity



# Positioned to realise value for shareholders

- Abra Project construction completed on time and on budget.
- First in-specification concentrate shipment achieved in March 2023.
- Abra is one of the largest & cleanest lead silver deposits in world under development (high grade, high value concentrate 1/10<sup>th</sup> typical deleterious elements). Exciting exploration ground and known copper-gold mineralisation below the Abra lead-silver deposit.
- JV between Galena 60% & Toho 40% underpins long mine life (13+ years) in exciting new mineral province in WA.
- Toho is largest refined lead supplier into strong & established Japanese market (Chigirishima smelter and refinery, Hiroshima).
- Galena has 10-year offtake agreement with IXM, one of the worlds largest base metals traders.
- Revised annual steady-state guidance<sup>(1)</sup>
  - mill throughput of 1.3Mtpa producing 85-90ktpa lead and 500-550kozpa silver.
  - annual average Lead C1 Direct Cash Cost of US\$0.50-0.60/lb<sup>(2)</sup>.
  - annual average EBITDA of A\$90-95M.

*Additional working capital required for ramp-up in 2023 because,*

- *Grade control drilling and revised geology interpretation (March 2023) of top/margin entry point of ore body has forced a new mine plan with revised ramp-up metal production profile (April 2023).*
- *Significant rainfall event and stoping delays in late March reduces achievable March/April ramp-up production.*
- *Increasing costs and lower lead production reduces CY2023 guidance and moderately lowers steady-state expectations.*

*Notes: (1) Assumes current lead price of US\$0.95/lb and AUD:USD exchange rate of 0.67. (2) Modelled in 'real' 2023 terms. Includes a by-product credit for net silver revenue of US\$0.05/lb (A\$0.07/lb).*





Section 2  
Abra Mine Update



# Performance to date

## Mine Construction/Commissioning

- Abra team and key service providers delivered project build on time and on budget against trend for industry performance in 2022.
- Mine development 5,131m project-to-date (orebody 230m below surface), first ore November 2022 (ByrneCut Mining).
- Infrastructure established.
- Abra concentrator commissioned, and instantaneous throughput rates and metallurgical performance on track (GR Engineering Services).
- In-spec saleable concentrate produced from day 1.

## March Quarter Performance

- Reconciled mine performance 136kt @ 4.4%Pb mined and processed producing 3,500 Pb tonnes in concentrate.
- Plan (July 2022) was 131kt @ 7.5% Pb for 8,500 Pb tonnes in concentrate.
- First shipment achieved.
- Focus on plant throughput commissioning demonstrates 1.3Mtpa throughput rate, material processed (HG – 60% of feed at 6.2% Pb, LG - 40% of feed at 1.7% Pb).
- Only development ore processed to date.
- First grade control model completed in April (first 250m x 200m mining block). Shows new geology interpretation adjacent to Abra fault causing HG ore loss on top/margin orebody forcing new ramp-up plan.



First concentrate shipment

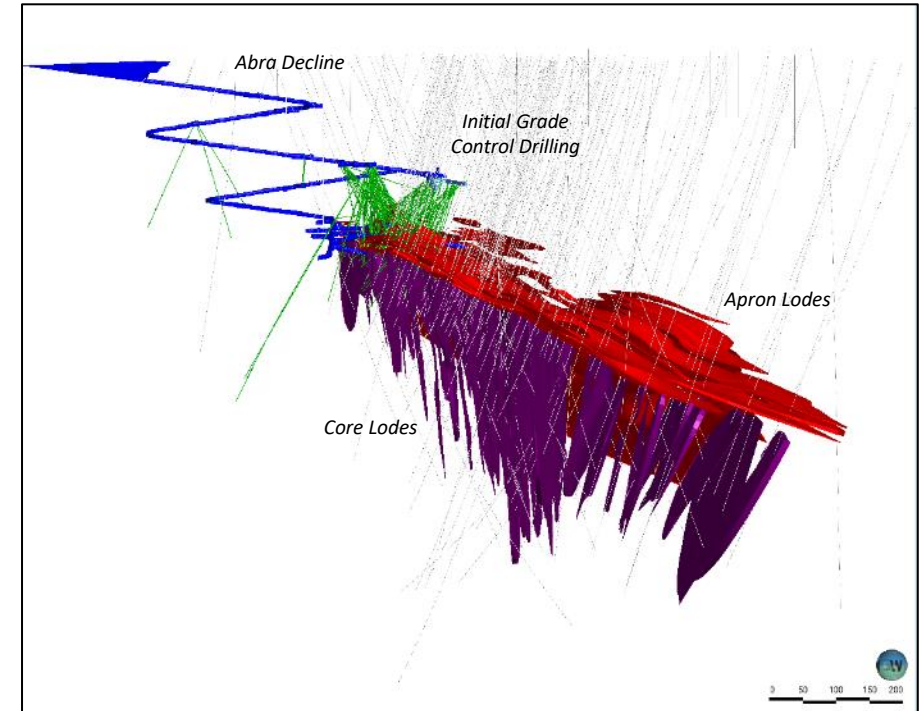


# Mining and revised metal production in ramp-up period

- New mining grade ramp-up slower than plan for short term. Mine grade 5-7% Pb compared to initial plan of 7.3% Pb for Q2 and Q3 CY2023.
- Lower grades due to revised geology interpretation on top/margin of orebody adjacent to Abra fault. Changes also increase dilution in mining shapes at that specific location (very edge of the orebody). This affects early months of production in a deposit that is planned to operate for more than a decade.
- Localised to the top/edge of the orebody (current mining area) – not representative of rest of deposit (Apron and Core zones) and long term mining plans.

*Technical team has confidence that this is a short term issue only with no longer term impacts.*

- *Revised interpretation of top/margin “edge effect” and its separation from the Abra fault confirmed through development access and grade control drilling (12.5m x 12.5m).*
- *Technical evidence that mineralised lodes away from the top/margin edge are consistent with original Apron and Core understanding due to rock stratigraphy and core orientation.*
- *The combination of development access and detailed grade control drilling/modelling has generated a revised CY2023 mine plan with improved confidence – based on the current drilling completed the revised plan includes 75% grade control information (12.5m x 12.5m drill density) in Q2 through to 50% in Q4 with 2 rigs running continuously improving geology and planning process.*



**Abra deposit and drilling highlighting surface drilling (grey traces) and recent underground grade control drilling (green traces)**



## Significant rainfall event in late March closes roads

- Late seasonal rains across Gascoyne River catchment area closes mine access roads delaying short term ramp-up production.
- ~100mm rainfall last week of March around Abra (3x historical March mean).
- Significant weather events in NW of WA.
- Mine put on 'reduced activities' due to low levels of critical supplies (explosives, gas, diesel and food).
- Plan to re-open/re-stock late April.
- March/April production loss of 60-80kt ore mined and processed (1 month at current ramp-up), concentrate shipping delay impacts cashflow.

*Expected to be a short term effect as we look forward to dry season.*







## Increased production costs

- Increase in CY2023 C1 costs from US\$0.55-0.65/lb to US\$0.70-0.80/lb due to 19% decrease in expected metal production for 2023 and 12% year on year increase in overall costs previously modelled in 'real' 2022 terms. Revised average steady-state C1 costs are expected to be US\$0.50-0.60/lb in 'real' 2023 terms.
- The following is a summary of the most significant cost increases,
  - 36% in underground drilling costs. Grade control drilling and assaying based on close drill spacing.
  - 22% in transport, logistics and shipping costs. 14% increase in concentrate haulage costs, higher international and domestic shipment assaying costs, and port charges.
  - 11% associated with Abra employment costs, total steady-state employment numbers unchanged but quicker ramp achieved. Premium seen in base metal operations compared to gold equivalents.
  - 10% increase in mining costs associated with mining contractor rise and fall provisions.
  - General increases in flights and accommodation, reagents, diesel and ROM loading costs.



# Revised production guidance vs. July 2022 guidance

Abra Mine Key Production Metrics <sup>1</sup>	Units	Revised Production Guidance CY2023	Initial Production Guidance CY2023	Production Guidance Update
Mill Throughput	<b>Mt</b>	<b>0.8-1.0Mtpa</b>	0.8-1.0Mtpa	Guidance maintained.
Lead Grade Mined	<b>%</b>	<b>6.0-7.0%</b>	7.6%	Guidance lowered; slower ramp in lead grade expected due to first areas being mined adjacent to the Abra fault.
Silver Grade Mined	<b>g/t</b>	<b>16.5-18.5g/t</b>	16.6g/t	Guidance increased; higher silver grade currently being mined.
Lead Metal Production	<b>kt</b>	<b>50-60ktpa</b>	53-68ktpa	Guidance lowered; slower ramp in lead grade expected due to first areas being mined adjacent to the Abra fault.
Silver Metal Production	<b>koz</b>	<b>325-425kozpa</b>	325-425kozpa	Guidance maintained.
Lead C1 Direct Cash Cost <sup>2</sup>	<b>US\$/lb</b>	<b>US\$0.70-0.80/lb</b>	US\$0.55-0.65/lb	Guidance increased; 19% lower lead metal production due to slower expected ramp up in lead grade and 12% year on year increase in costs from previous cost guidance modelled in 'real' 2022 terms.
Average Annual EBITDA <sup>3</sup>	<b>A\$M</b>	<b>A\$15-25M</b>	A\$45-55M	Guidance lowered; 19% lower lead metal production due to slower expected ramp up in lead grade and 12% year on year increase in costs from previous cost guidance modelled in 'real' 2022 terms.
Lead Metal Price	<b>US\$/lb</b>	<b>US\$0.95/lb</b>	US\$0.90/lb	Current lead price.
Exchange rate – US\$ per A\$1	<b>AUD:USD</b>	<b>0.67</b>	0.68	Current AUD:USD exchange rate.

## Table Notes

1. Key production metrics shown reference 100% of Project. Abra Mine is owned 60% by Galena & 40% by Toho Zinc.
2. Modelled in 'real' 2023 terms. Includes a by-product credit for net silver revenue of US\$0.05/lb (A\$0.07/lb).
3. Steady state annual EBITDA after CY2023 is expected to average A\$90-95M (Previous guidance: A\$100M) modelled in 'real' 2023 terms.



Section 3  
Equity Raising Overview



# Equity raising details and timetable

## Offer Details

- A\$20m two tranche placement.
- Offer Price: A\$0.15 per share.
- 34.8% discount to last close of A\$0.23/sh.
- 36.6% discount to trading day VWAP of A\$0.237/sh.

## Indicative Timetable

Initiation of placement	19 Apr 23
Expected settlement date tranche one placement	28 Apr 23
Expected allotment date tranche one placement	1 May 23
General meeting	Mid Jun 23
Expected settlement date tranche two placement	Mid Jun 23
Expected allotment date tranche two placement	Mid Jun 23

## Pro-forma Capital Structure

Current shares on issue	619M
Placement shares	93M
Tranche two placement shares <sup>1</sup>	40M
<b>Total shares on issue<sup>2</sup></b>	<b>752M</b>
Cash A\$	40M
Debt A\$ - US\$110M Taurus debt drawn	164M

### Table Notes

1. Subject to shareholder approval at a general meeting to be held in mid Jun 23.
2. Post equity raise estimate.

## Use of Proceeds

- Placement proceeds will be used to fund Galena's 60% portion of working capital funding for Abra.

## Sources of Capital<sup>1</sup>

	A\$M
Group cash at 31 Mar 23 <sup>2</sup>	20.7
Galena share placement (net of fees)	18.8
Toho's 40% contribution to Abra JV	12.5
Revenue	214.7
<b>Total Sources of Capital</b>	<b>266.7</b>

## Uses of Capital<sup>1</sup>

	A\$M
Abra JV expenditure	205.1
Galena corporate costs	1.3
Galena & Abra exploration costs	2.2
Financing costs	14.4
Debt repayments	13.3
Group Cash at 31 Mar 24	30.4
<b>Total Uses of Capital</b>	<b>266.7</b>

### Table Notes

1. Assumes lead metal price of US\$0.95/lb and AUD:USD exchange rate of 0.67.
2. Includes Abra's unsecured reserve facility cash balance of A\$16.5M at 31 March 2023.



# Galena Mining Limited

## CAPITAL STRUCTURE At 31 March 2023

Shares on issue	619M
Options/rights <sup>1,2</sup>	15M
Share price (A\$)	23.0c
Market capitalisation (A\$)	142M
Cash (A\$) <sup>3</sup>	21M
Debt (A\$) - US\$110M Taurus debt fully drawn <sup>4</sup>	164M
Enterprise Value (A\$) (Market Capitalisation + Net Debt)	227M

Notes: **(1)** 13.2M contingent performance rights for Directors & Executives. **(2)** 2.2M employee share appreciation rights. **(3)** Includes Abra cash balance of A\$17.0M (including unsecured reserve facility cash balance of A\$16.5M) at 31 March 2023. **(4)** Converted using AUD:USD FX rate of 1.00:0.67.

## ASX: G1A Share Price History





## Section 4

### Key Risks



# Key risks

## **Economic conditions**

Economic conditions, both domestic and global, may affect the performance of the Company. Adverse changes in macroeconomic conditions, including global and country-by-country economic growth, the cost and general availability of credit, the level of inflation, interest rates, exchange rates, government policy (including fiscal, monetary and regulatory policies), general consumption and consumer spending, employment rates and industrial disruption, amongst others, are outside the control of the Company and may result in material adverse impacts on the Company's business and its operating results.

## **Liquidity and future financing**

Development of the Company's Abra Base Metals Mine and exploration of the various mineral properties in which the Company holds interests depend upon the Company's ability to obtain financing through joint ventures, debt financing, operational cash flows, equity financing or other means. Volatile markets for mineral commodities or the factors affecting financial institutions and other third parties' assessments of the Company may make it difficult or impossible for the Company to obtain debt financing or equity financing on favourable terms or at all. Failure to obtain such facilities or financing on a timely basis may cause the Company to postpone its development plans, dispose of rights in some or all of its properties or joint ventures, which may have a material adverse effect on the Company's financial position and performance.

## **Speculative nature of mineral exploration and development**

The commercial viability of a mineral deposit, once discovered, is dependent upon a number of factors, some of which are the particular attributes of the deposit, such as size, grade, metallurgy and proximity to infrastructure, metal prices and government regulations, including the availability of required authorisations, permits and licences and regulations relating to royalties, allowable production, importing and exporting of minerals and environmental protection. Successful development is also subject to a number of operational and other risks, including unexpected geological formations, conditions involved in the drilling and removal of material (which could result in damage and/or destruction to plant and equipment, loss of life or property, environmental damage and possible legal liability), obtaining governmental and stakeholder approvals, changes in reserves, commodity prices, exchange rates, construction costs, design requirements, delays in construction and development plans.

## **Uncertainty relating to Inferred Mineral Resources**

The mine plan for the Company's Abra Base Metals Mine includes Inferred Mineral Resources, which are not Ore Reserves and have not reached the level of geological confidence that would enable economic viability calculations to be performed on them. Due to the uncertainty which may attach to Inferred Mineral Resources, there is no assurance that Inferred Mineral Resources will be upgraded to Measured or Indicated Resources or Proven or Probable Ore Reserves.

## **Production schedule and ramp-up**

Commissioning and ramp-up of production may not proceed to plan, with potential for delay in the timing of targeted production and/or a failure to achieve the level of targeted production. In certain circumstances, these potential delays or difficulties may necessitate additional funding which could lead to additional equity or debt requirements for the Company. In addition to potential delays, there is a risk that capital and/or operating costs will be higher than expected or there will be other unexpected changes in variables upon which development and commissioning decisions were made. These potential scope changes and/or cost overruns may also lead to reductions in revenues and profits and/or additional funding requirements.

## **Changes in capital and operating cost estimates**

Whilst every care has been made in estimating the capital cost and future operating costs for the Company's Abra Base Metals Mine, including contingency, the actual cost structure experienced in constructing facilities and operating mines or process plants may vary from current estimates. Any such variations could adversely affect the Company's future financial position and performance.



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**Appendix A - Abra Mine  
Operations Update & Revised CY2023  
Guidance Additional Information**







# Abra mine ramp-up and revised 2023 production guidance

Abra has revised its 2023 production guidance following mine ramp-up issues at the Abra mine site since construction completion was achieved in January 2023<sup>(1)</sup>

Lead production is expected to reduce by 19% from 53-68kt to approximately 50-60kt in 2023 due to a revised mining and processing plan associated with the ramp-up period to steady-state production. Mine operating costs have also increased by approximately 12% since previous guidance<sup>(2)</sup>.

- Mine development and grade control drilling of the Upper Apron area adjacent to the Abra fault has resulted in a different (localised) to expected geological setting in the margin (top) of the orebody above 1260mRL. This has resulted in a reduction in high-grade stoping areas in that specific location planned to be mined during the ramp-up period. Replacement stoping areas are lower grade, reducing metal production during this period.
- Significant rainfall during the last week of March closing mine access roads in the Gascoyne River catchment area (Great Northern Highway and Ashburton Downs Road) has resulted in reduced activities to conserve critical and general consumables. This has caused the April concentrate shipment to be pushed into May with plant scheduled to recommence the week commencing 24 April. Planned/expected April ramp-up production will not be achieved.
- Overall increase in operating costs of approximately 12% is also impacting EBITDA in CY2023 and LOM.
- The combination of the lower grade during ramp-up and the loss of mine road access and increased costs has caused the mine to draw-down on its unsecured reserve facility (“URF”)<sup>(3)</sup> during this period of low working capital. Additional working capital funding will be required during ramp-up period.
- Mining and processing tonnage quantities over the full year are in line with previous production guidance.

Overall Life of Mine “Steady- State” guidance based on the included ramp-up changes including increased costs shows a reduction in average annual steady-state EBITDA from A\$100M<sup>(2)</sup> to A\$90-95M<sup>(4)</sup>

#### Notes

1. See Galena ASX announcement of 10 January 2023 (Abra Construction Complete – First Ore Feed to Plant)
2. See Galena ASX announcement of 25 July 2022 (Re-Release: Abra Initial Production Guidance)
3. See Galena ASX announcement of 26 July 2022 (Galena successfully raises \$17 Million)
4. Modelled in 2023 “real” terms. Assumes current lead metal price of US\$0.95/lb and AUD:USD exchange rate of 0.67.



# Mine development and grade control drilling

- The original mine plan was based on access to the top of the Abra orebody (237m below surface) and mining in a top-down sequence. Mining would commence immediately adjacent to the Abra fault and progress down-dip from that location.
- Mine planning was based on the April 2021 Mineral Resource Estimate MRE<sup>(1)</sup>.
- During development, a detailed grade control drilling program would be completed to provide increased mining confidence during ramp-up, as part of the standard mining process.
  - 106 holes have been completed.
  - Apron lode area initial coverage of 250m x 200m.
  - Hole density 12.5m x 12.5m (MRE stage was 40m x 40m).
- Grade control drilling completed area represents approximately 4.6% of total MRE<sup>(1)</sup>.
- Loss of metal due to geological change adjacent to Abra fault approximately 1.6% of total MRE<sup>(1)</sup>.
- 2021 MRE within grade control area at 5% Pb COG is 1.6Mt @ 7.1%Pb & 22g/t Ag for 119kt Pb. Grade control model within the same area confirms 1.1Mt @ 7.3% Pb & 24g/t Ag for 79kt Pb.
- A change in the geology setting of the mineralisation immediately adjacent to the Abra fault has reduced the tonnage of mineralisation previously interpreted to be in that location. This is specific to the localised geology setting in that area, not previously identified during the Feasibility Study.

## Notes

1. See Galena ASX announcement of 28 April 2021 (Galena achieves 2020 drilling objectives at Abra – updates MRE).

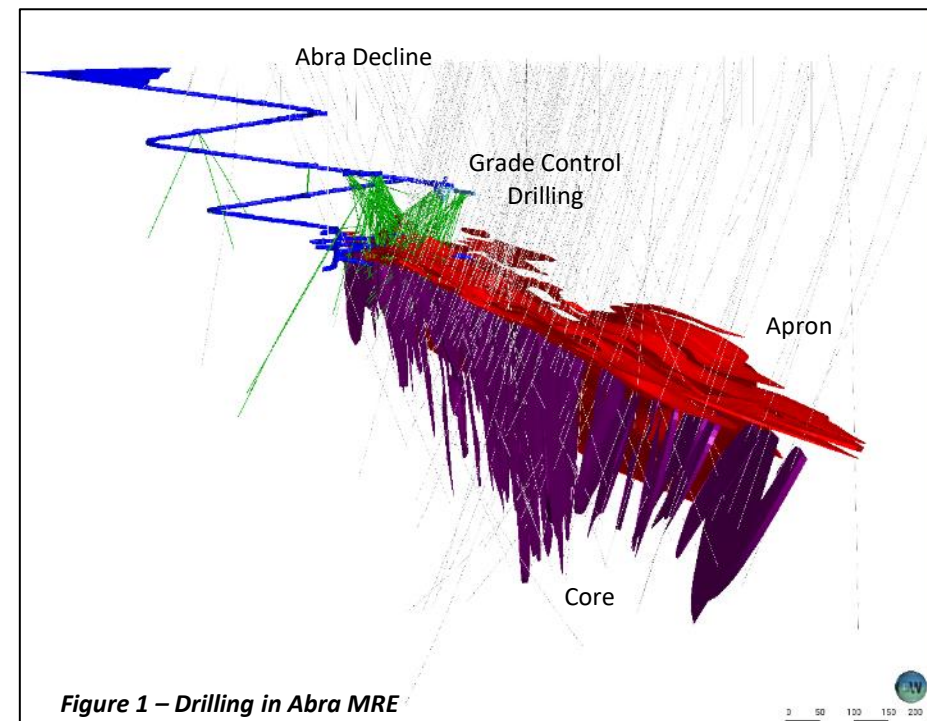


Figure 1 – Drilling in Abra MRE

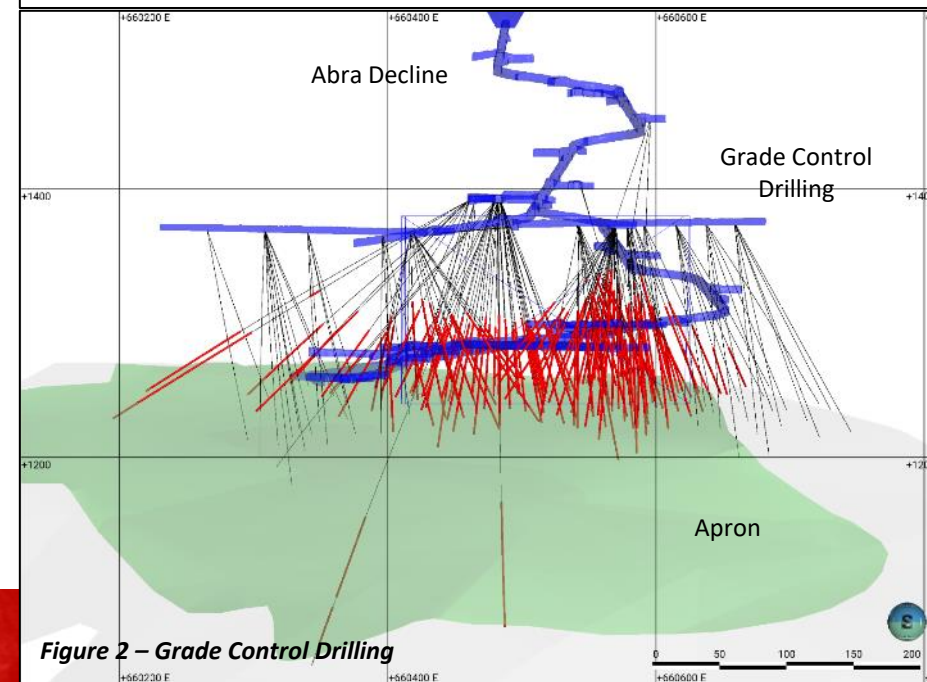


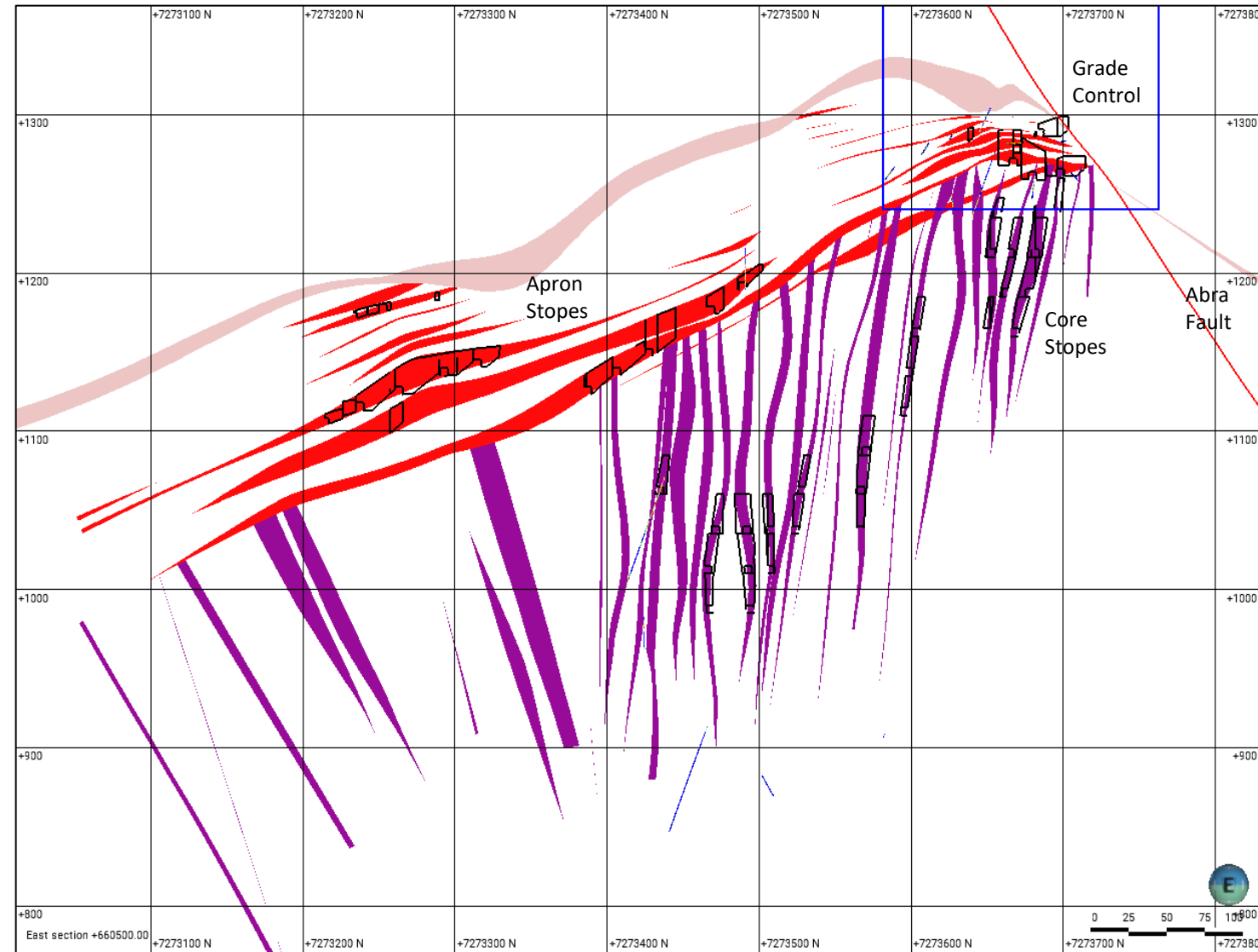
Figure 2 – Grade Control Drilling



# Upper Apron geological setting

- Original geological interpretation of the Upper Apron area and associated Apron lodes was for the mineralisation to continue in its modelled Apron orientation to the fault location. Surface drilling supported this interpretation.
- Mine development and grade control drilling is showing evidence of hydrothermal doming on a large scale (deposit) and on a smaller scale (carbonate dome identified in grade control drilling area).
- Rock units are related to the edge of the hydrothermal doming and the area adjacent to the Abra fault is seen as a northern boundary to the doming.
- The flattening and bending of the mineralisation in this location is seen as a folded anticline with a E-W axis at the north end of the Abra deposit adjacent to the Abra fault.
- The Abra fault is considered to potentially be related to a later movement along the weakened anticlinal axis in that orientation.

Figure 3 – Abra cross section

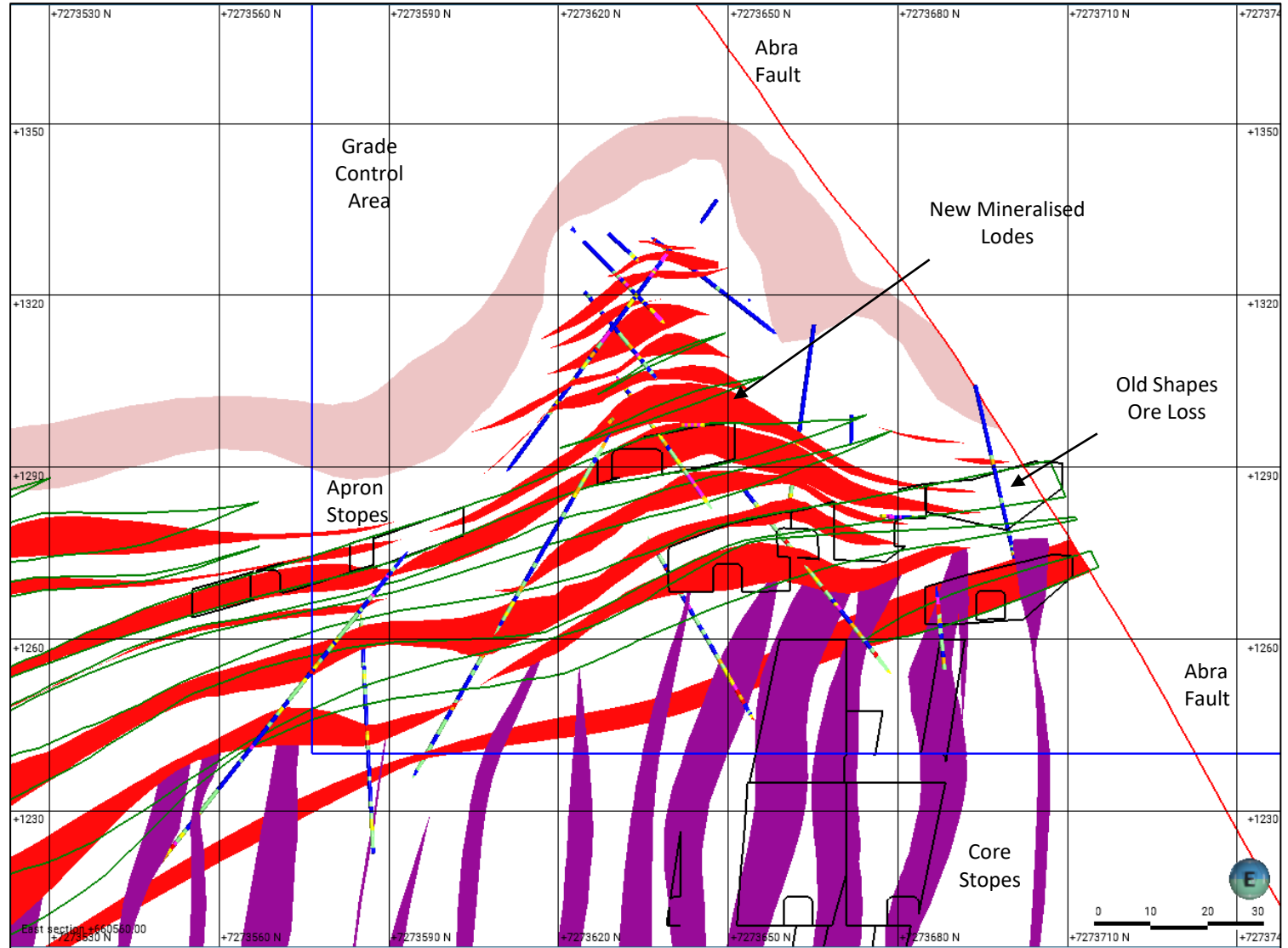




# Upper Apron carbonate doming

- Figure 4 shows an example of the original mineralisation wireframes (green) and the stoping shapes (black) designed in the Feasibility Study.
- Level access and grade control drilling has identified the mineralisation associated with a carbonate dome effect which has not reached the Abra fault as originally interpreted. New wireframes (light salmon) now form the basis of the revised modelling that underpins the revised mine plan.
- Flat mineralised lodes are being examined closely in this area to minimise any additional internal dilution associated with mining shapes and stopes.

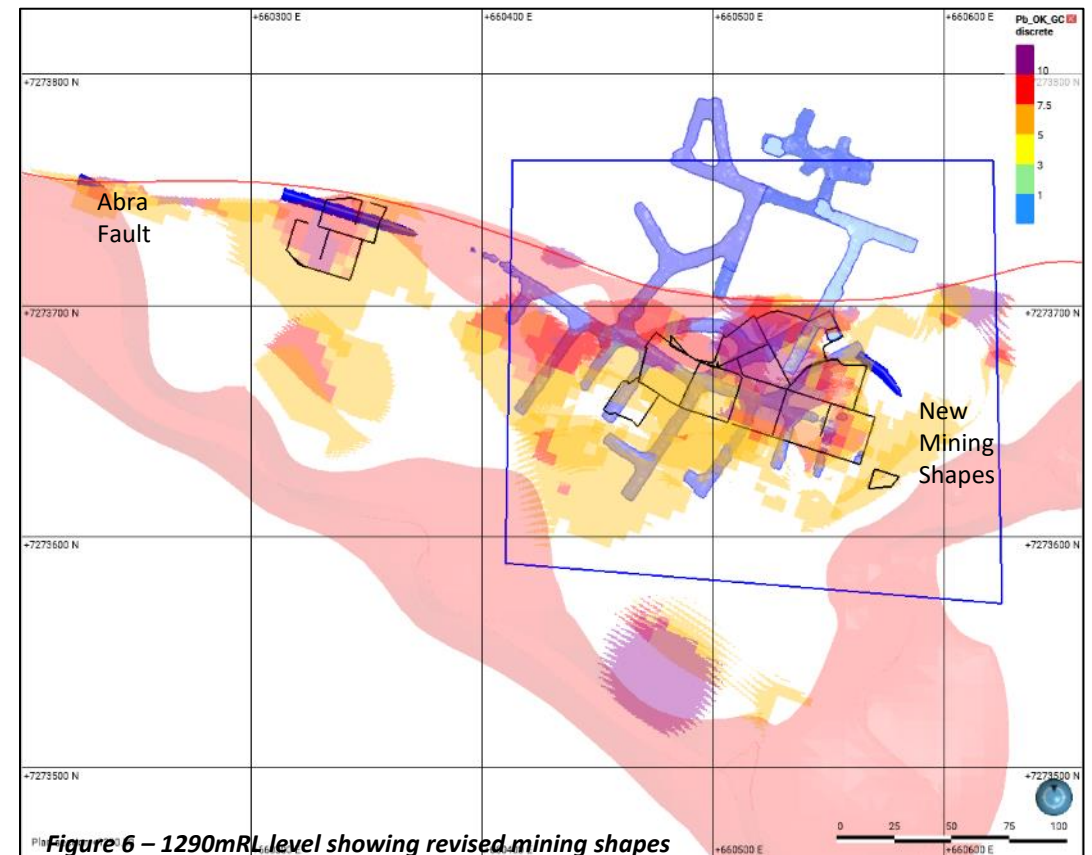
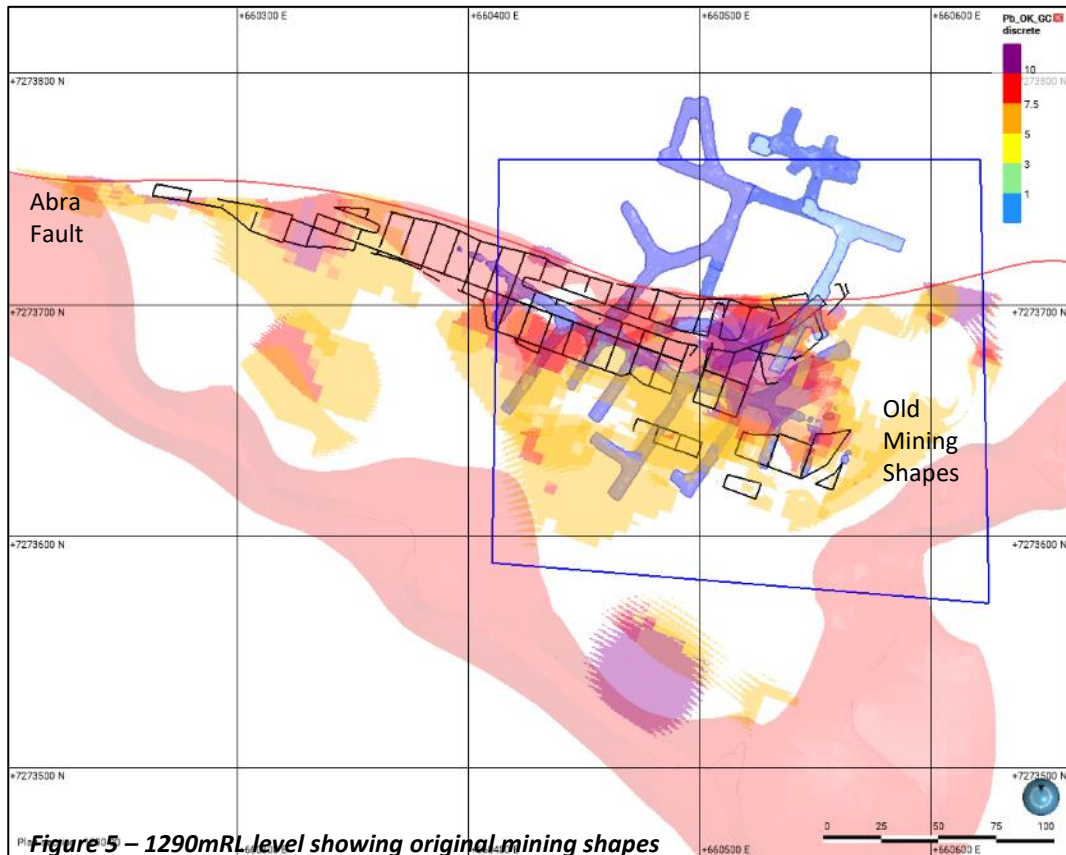
Figure 4 – Abra cross section grade control area





# Geology change effect on the mine plan

- Loss of the upper Apron ore adjacent to the Abra fault has altered the mine plan to mine lower grade ore during the ramp-up period in 2023.
- Figures 5 & 6 below show the effect of the lost mineralisation adjacent to the Abra fault at the top of the orebody. Figure 5 shows the original mining shapes 1290mRL. Figure 6 shows the revised mining shapes based on the removal of the ore immediately adjacent to the Abra fault.
- In total approximately 390kt @ 7.2% Pb of ore has been removed from the original plan above 1260mRL level.





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Thankyou  
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*Appendix B – Additional Project Slides Attached*

*Figure 7 – 1280mRL level showing face mineralisation*



## Mine built in 2022, ramping up in 2023

- 17 Nov 22, Abra construction 92% complete – first ore underground.
- 13 Dec 22, Abra construction at 97% complete – first ore stockpiled.
- 10 Jan 23, Abra construction complete – first ore feed to plant.
- 13 Jan 23, First concentrate produced at Abra.
- 27 Mar 23, First concentrate shipment.





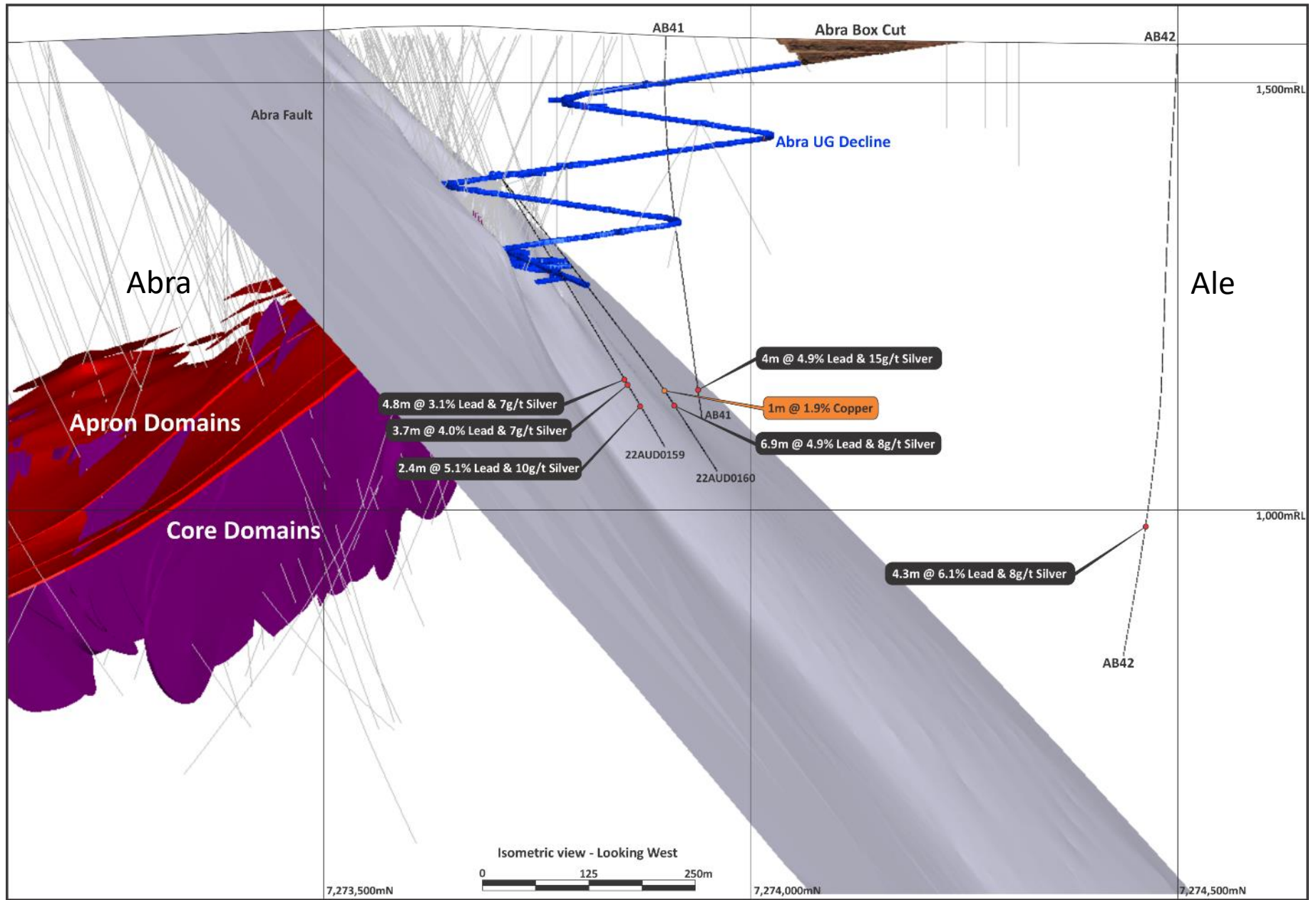
# Exploration

- 9 Feb 23, Drilling hits northern extension of Abra mineralisation.

Isometric view showing holes drilled north of Abra fault confirming mineralisation fault offset of 70-100m and being 100m from planned infrastructure and the 3 holes are spread over an area of 300m (east-west) by 100m (north-south).

Positive confirmation of down hole electromagnetic survey information.

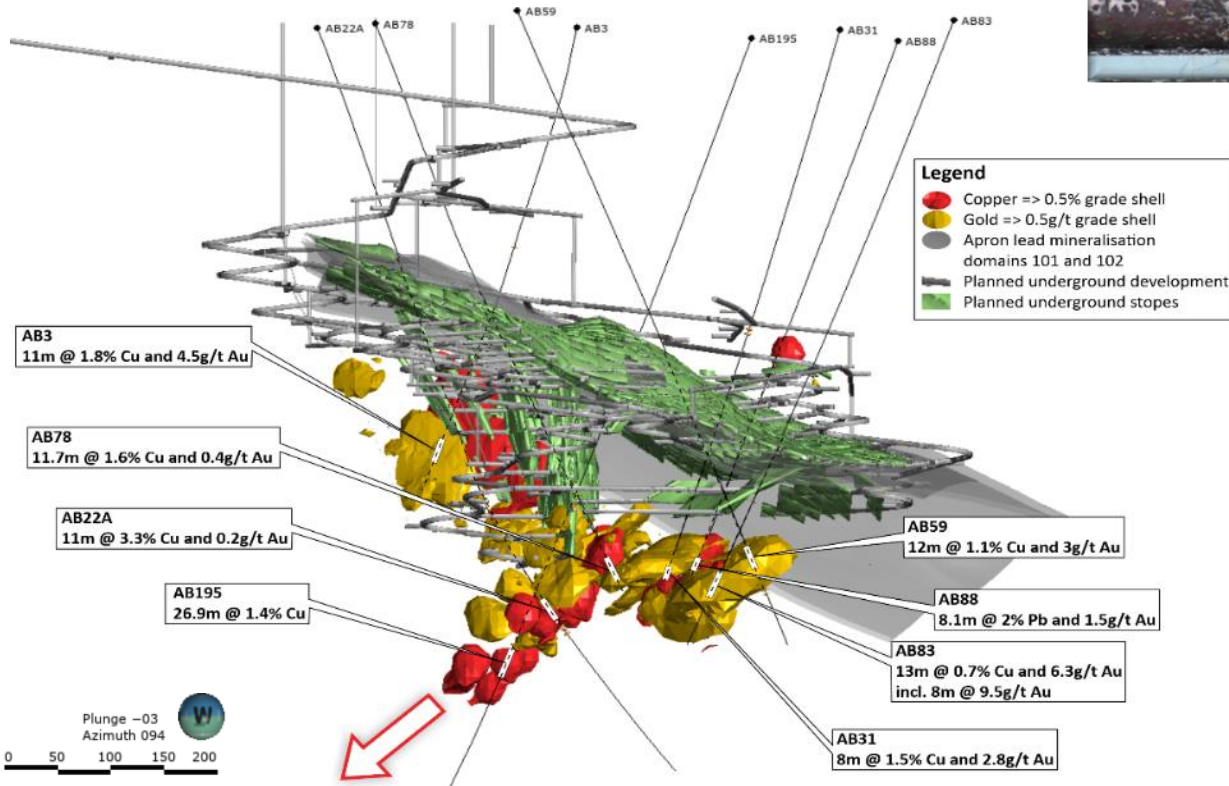
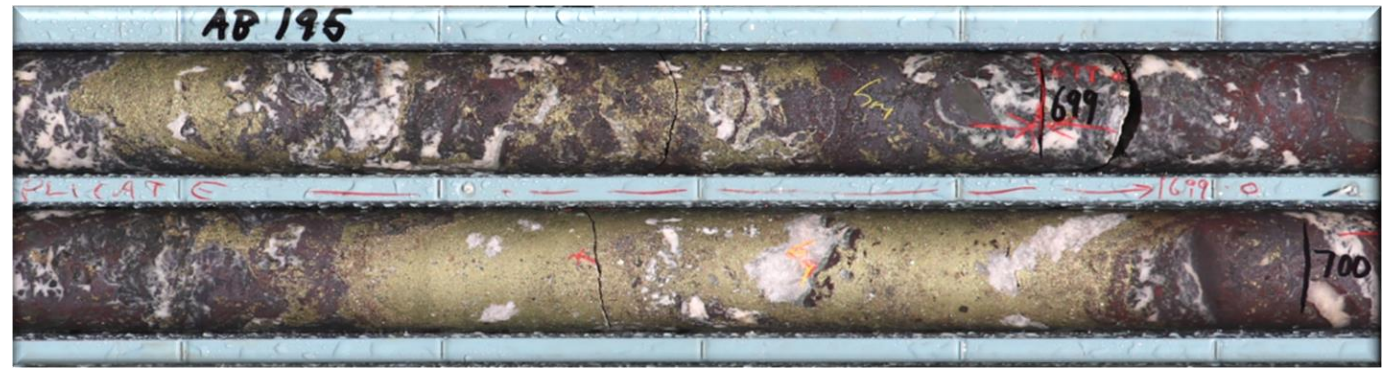
View also shows location of Ale prospect located approximately 700m to the north of Abra







# Copper - Gold



**First ever hole specifically targeting copper and gold, (AB195) provided assay results in February 2021 delivering multiple copper and gold intersections**

- Significant intersection showing massive and disseminated chalcopyrite between 360m to 795m down-hole.
  - 3.0m @ 4.2g/t gold and 1.1% copper from 671m.
  - 1.7m @ 6.9% copper from 698m.
  - 8.9m @ 2.3% copper from 773m.
  - 26.9m @ 1.4% copper from 764m, including 0.8m at 8.5% copper from 773m.
- Down-hole EM survey of AB195 (August 2021) completed identifying several targets for drill testing to be done from underground drill platforms.

Notes

1. See Galena ASX announcement of 22 February 2021 (first Targeted Copper-Gold Hole at Abra Hits 26.9m @ 1.4% Copper)

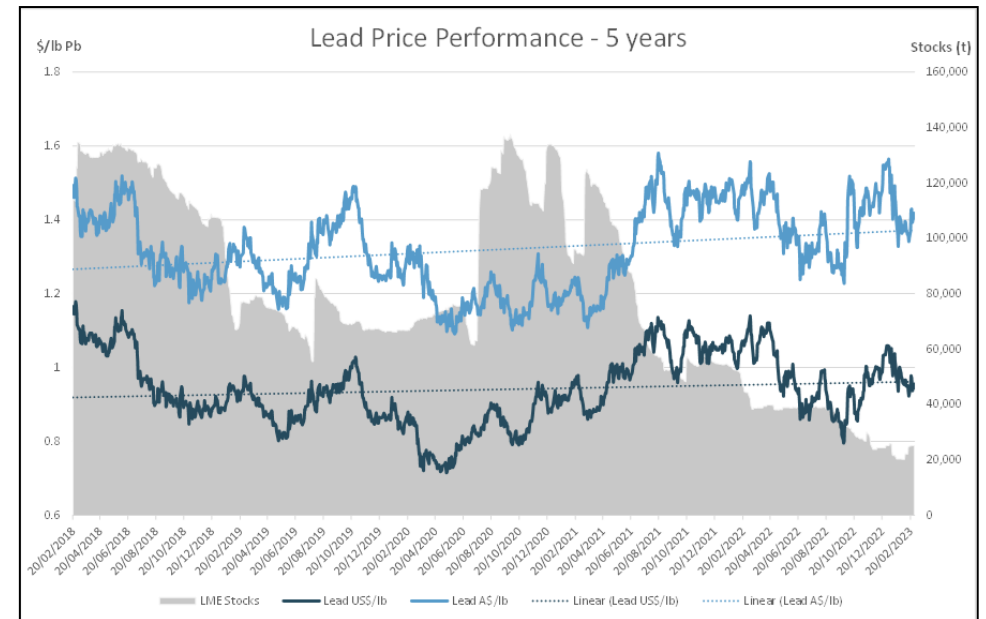
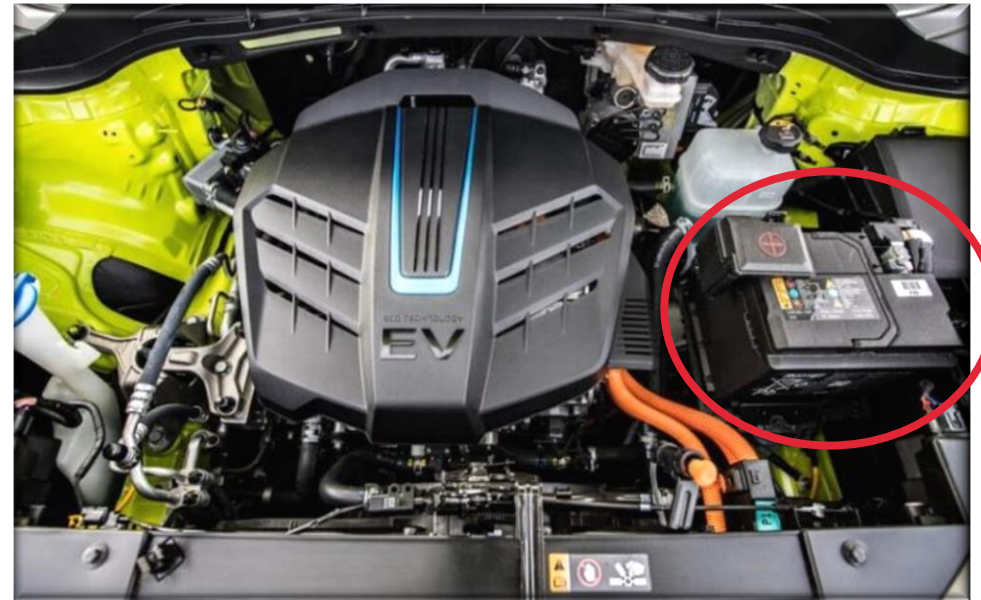


# Lead Demand

*Galena strongly supports the ongoing elimination of lead-bearing petrol fumes and lead based paint*

1. In 2021 the global lead consumption for refined lead was 13.1Mtpa<sup>(1)</sup>.
2. Global lead demand forecast to grow by 2.0% pa over the long-term period to 2040 (driven by developing countries)<sup>(1)</sup>.
3. 87% of refined lead is used in batteries, 65% are automotive batteries with 50% being replacement and 15% new.
4. ~400 million lead-acid batteries produced each year supplying 1.4 billion vehicles worldwide (1 for every 7 humans).
5. Every vehicle, including the large majority of EV's require 12V lead-acid batteries for key safety and control functions (cheap & reliable).
6. Start-stop technology and Hybrid options are increasing market penetration (Hybrids deliver 70% less emissions for 30% less cost).
7. Increasing demand for large Battery Energy Storage Systems (BESS) associated with solar & wind energy generation and high tariff grid exposure.

12V lead-acid battery in a Kia Soul EV

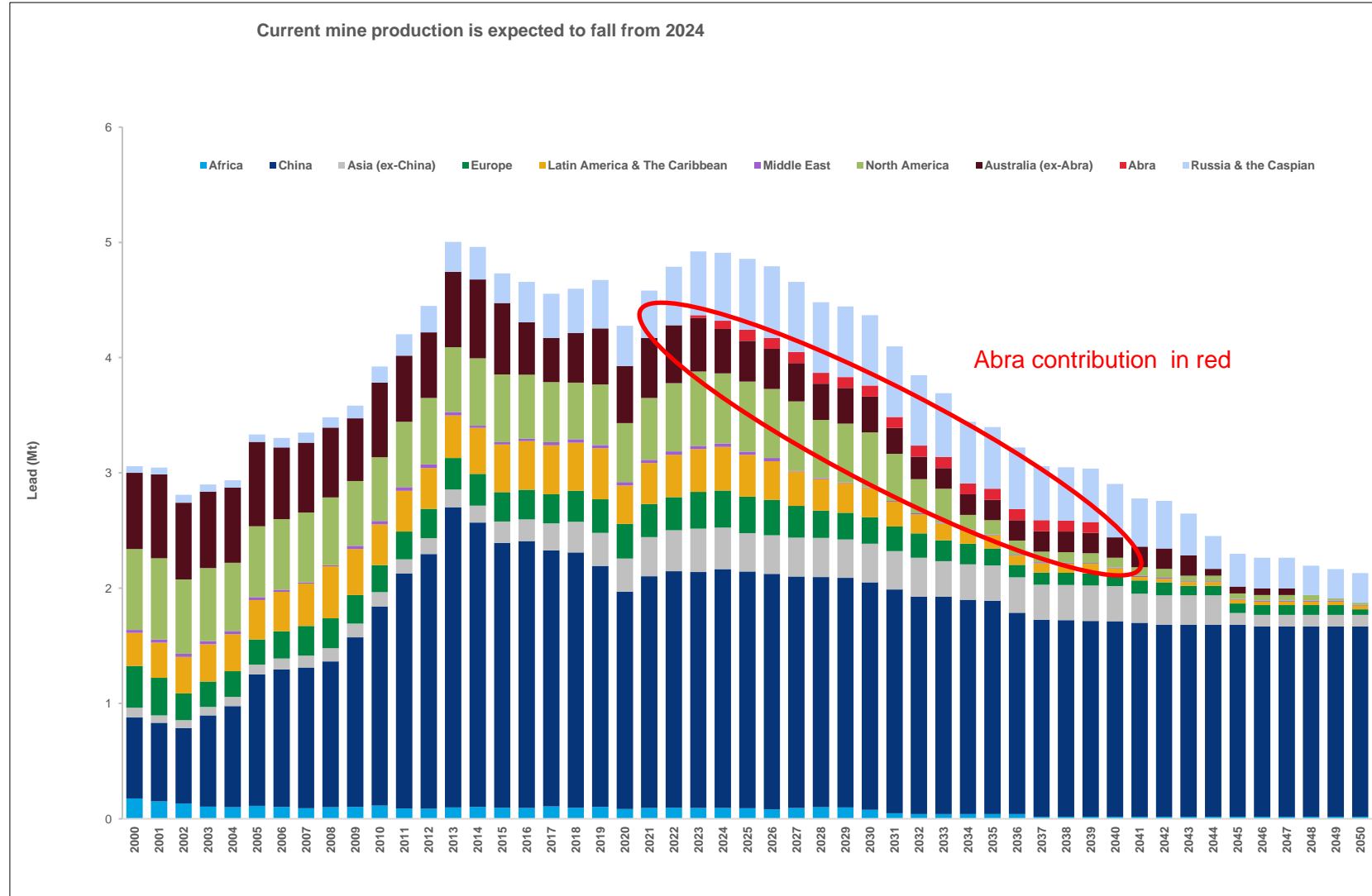


Notes: 1. Global Lead Strategic Planning Outlook – Q1 2022 (Wood Mackenzie)



# Lead supply

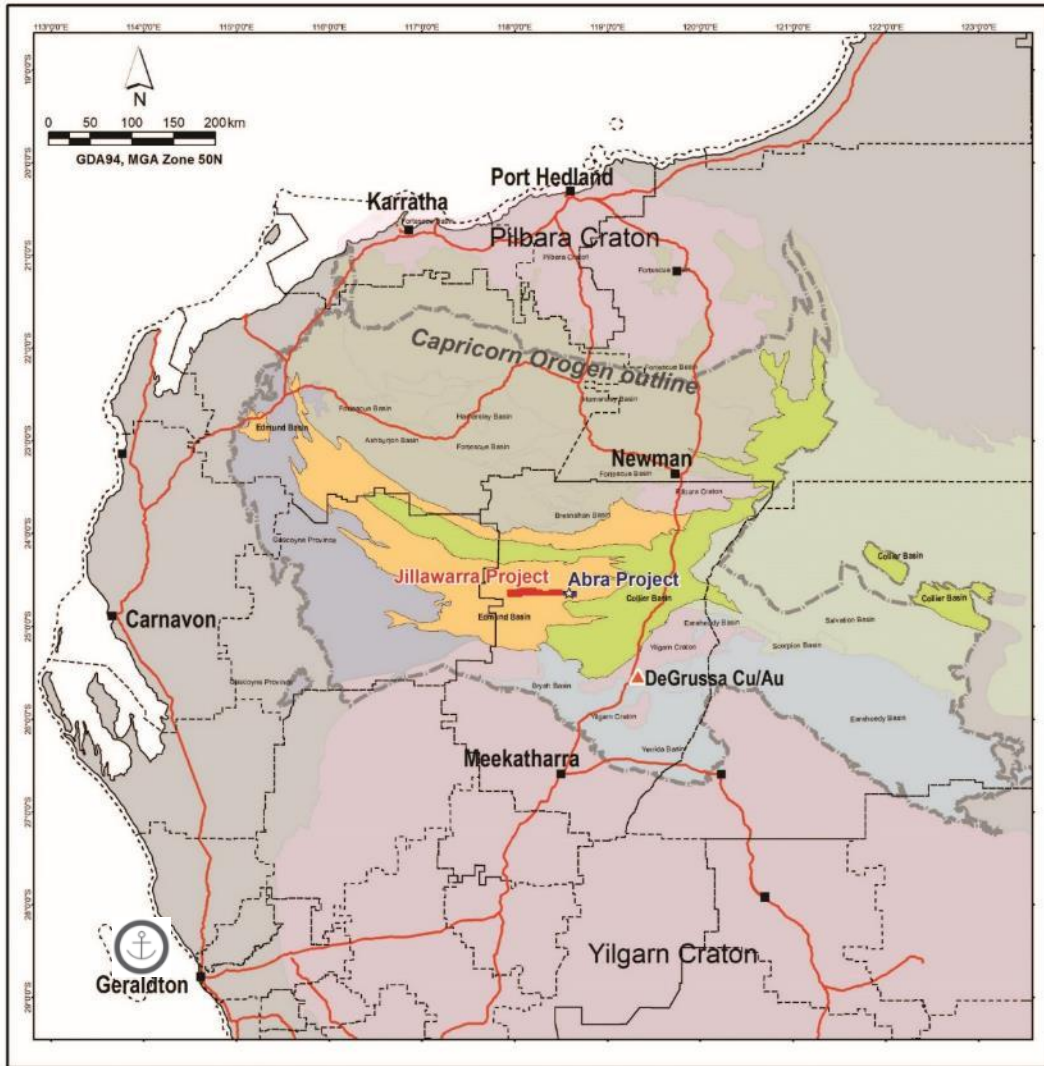
1. Global mined lead production is forecast to supply a modest increase from 4.6Mtpa to 4.8Mtpa by 2026 (Including Abra). Reserve depletion and the lack of new mines is generating a deficit outlook beyond 2024<sup>(1)</sup>.
2. Galena is very supportive of increasing lead recycling (currently over 55% worldwide).
3. European smelters under pressure due to surging power prices (Glencore reviews lead operations at Italian plant, Portovesme<sup>(2)</sup>).



Notes: 1. Global Lead Strategic Planning Outlook – Q1 2022 (Wood Mackenzie)  
 2. Reuters September 29, 2022



# Building a new mine in a new mineral province in WA



- The Abra mine is located within Edmund sedimentary basin in the Gascoyne region of WA .
- Granted Lease's with all major permits and native title arrangements in place. Construction completed.
- High-grade lead-silver concentrate will be trucked to Port of Geraldton in sealed half-height containers, on existing roads.
- Port of Geraldton capacity & access contract in place. Port has all permits and infrastructure required to handle Abra's product (it currently handles similar product for other producers).

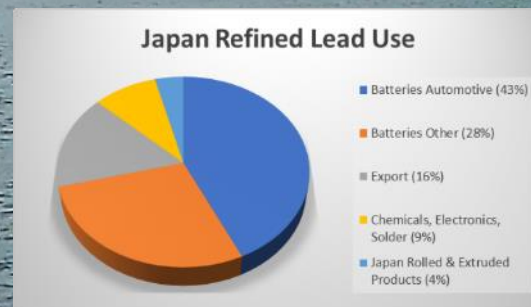


# 東邦亜鉛株式会社 TOHO ZINC CO., LTD.

2019 – **Abra JV**  
 2010's – Open Rasp mine in NSW(2012), **Acquire 100% CBH Resources**  
 2000's – **CBH Resources Ltd, Australia**. Silver upgrade Chigirishima  
 – Tianjin & Gunma Kankyo Lead recycling JV's  
 1990's – JV Dalian Jingya & Guang Ming Co electric components  
 1980's – Annaka Cadmium Oxide smelter & refinery  
 1970's – Lead sound insulation boards, SOFT CALM  
 1960's – Onahama Zinc & Fujioka Iron smelters & refineries established  
 – Gran Bretana mine Peru & Qaleh Zari mine Iran  
 1950's – **Chigirishima** converted from Copper to Lead smelter & refinery  
 1930's – **Toho Zinc Co established** from Japan Zinc Smelting Co

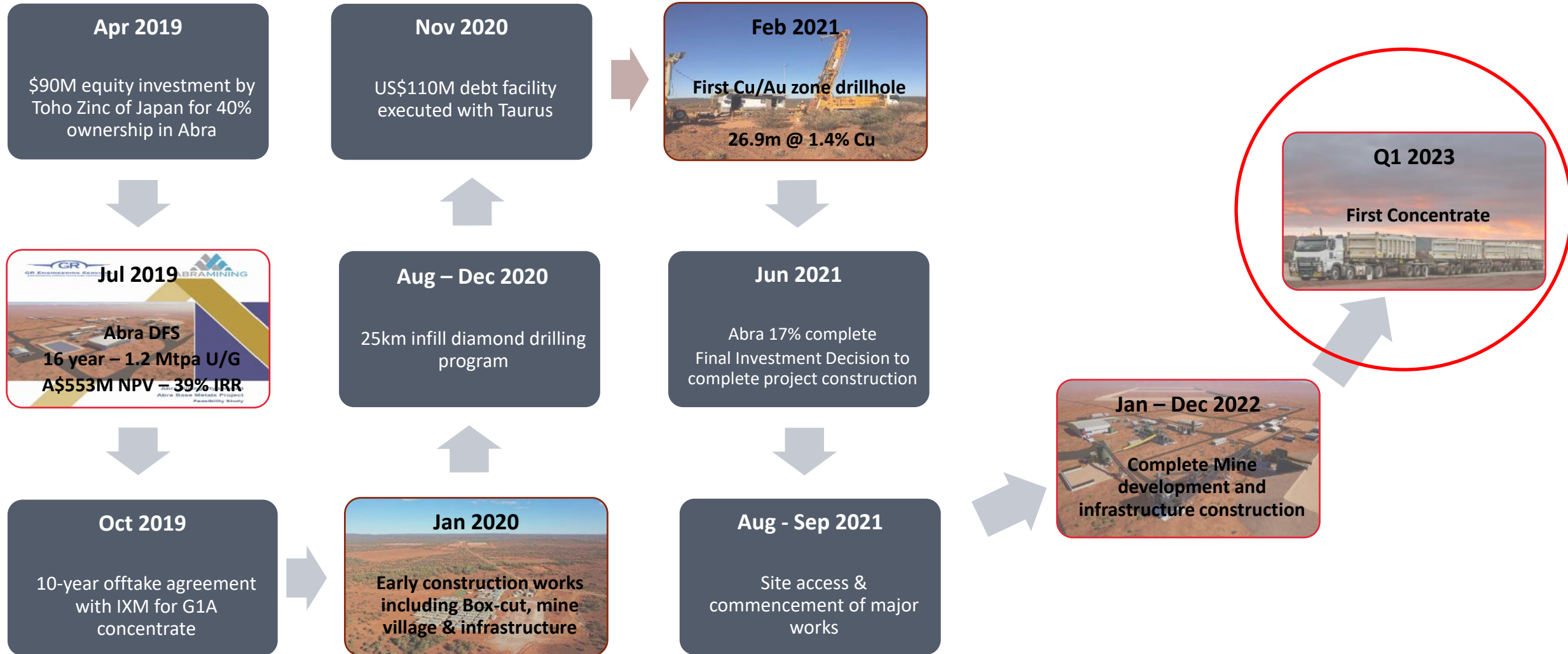
Japan contributes 2% of worlds refined lead production (230-250ktpa)  
 Toho top producer in Japan domestic market (100ktpa refined Lead)  
 Toho imports 140-160ktpa Lead concentrate to Chigirishima

TOHO investment in Abra		
Concentrate Supply	Abra	Typical Other
Time frame	13+ years	
Qty	Min 50ktpa	
Lead grade	75 %	55 - 65 %
Silver grade	129 g/t	100 - 2,000 g/t
Deleterious Elements (DE)	1/10 <sup>th</sup> DE	DE



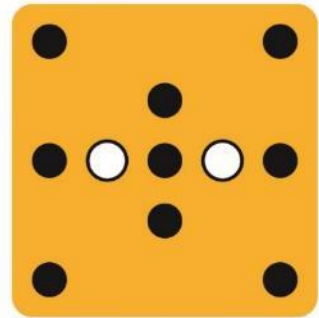


# Abra project timeline





# Key contractors and service providers



**BYRNECUT**

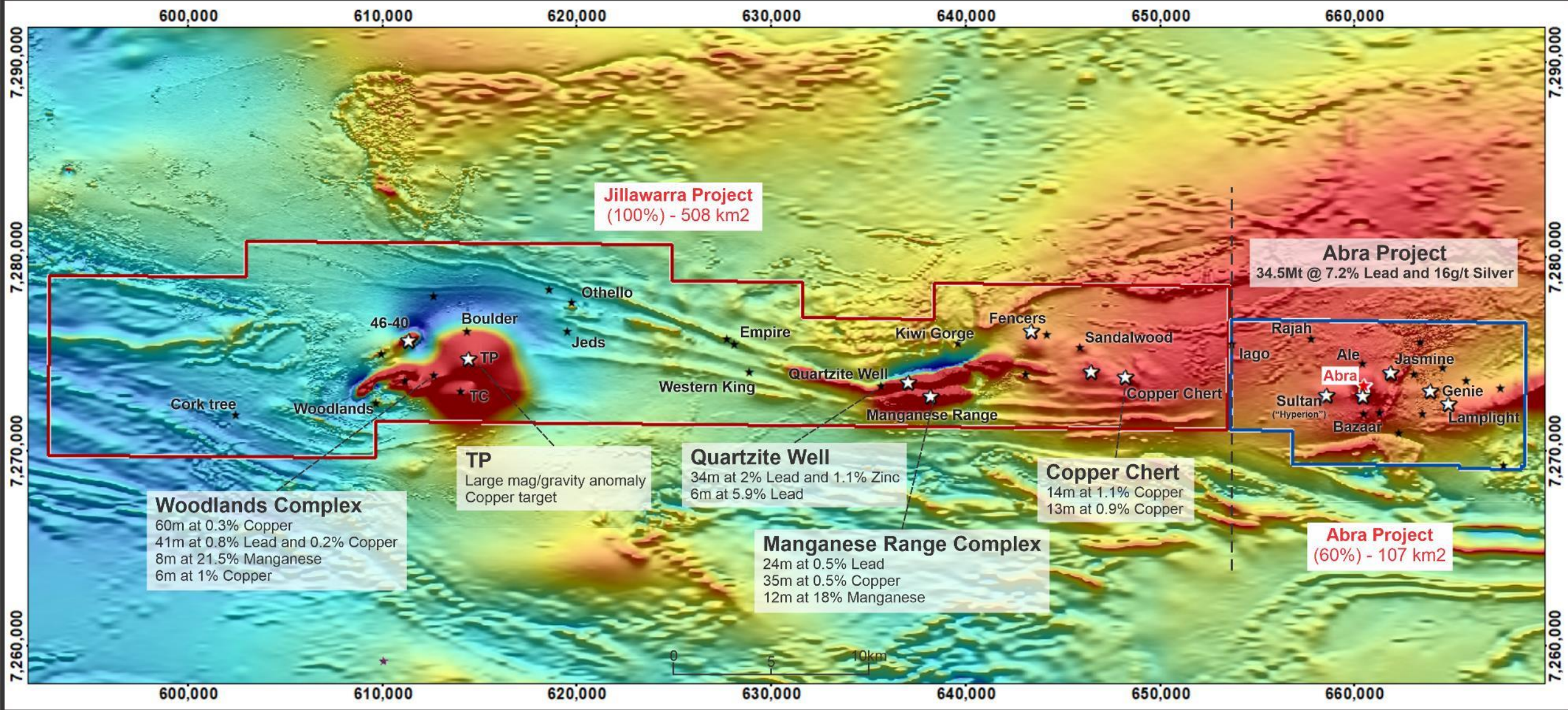


**GR ENGINEERING SERVICES**  
ENGINEERING CONSULTANTS AND CONTRACTORS





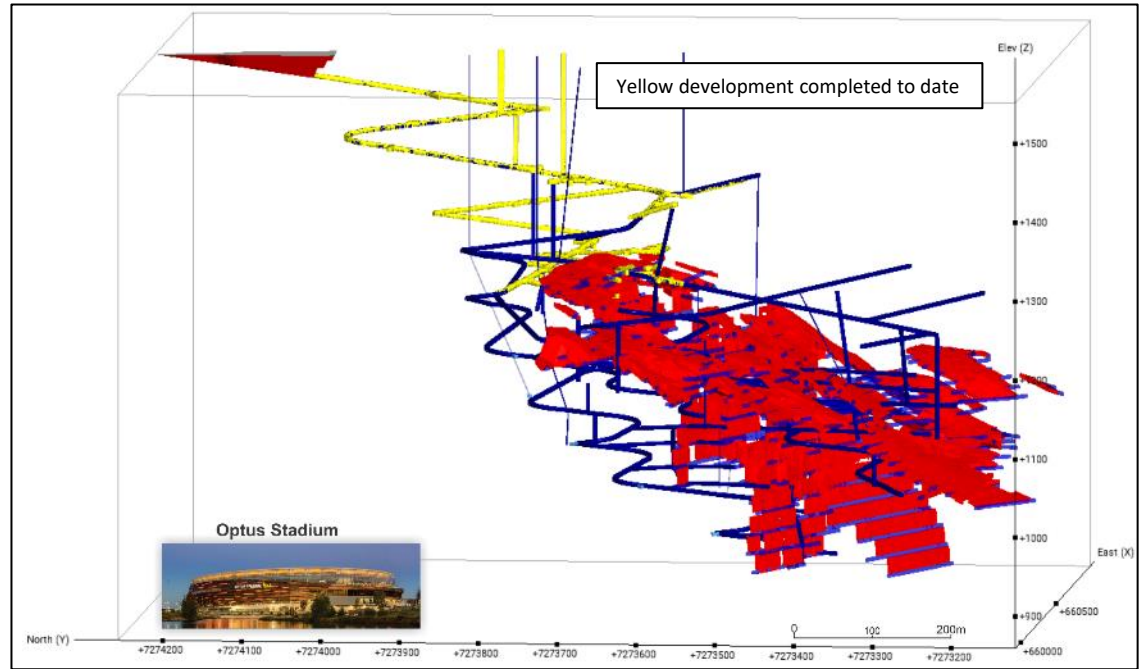
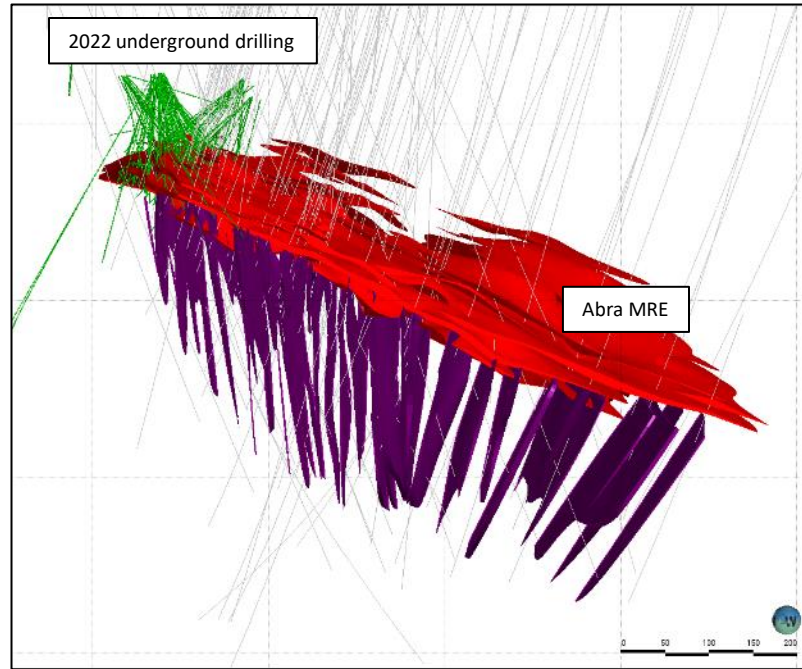
# Mine being built within potential “Cluster” of deposits







# Abra Mineral Resource and mine plan



## JORC Mineral Resource estimate (April 2021 Resource) at a 5% lead cut-off grade<sup>1</sup>

<u>Resource classification</u>	<u>Tonnes (Mt)</u>	<u>Lead grade (%)</u>	<u>Silver grade (g/t)</u>
Indicated	16.9	7.4	17
Inferred	17.5	7.0	15
Total	34.5	7.2	16

Notes: 1. For more detail on Mineral Resource Estimate please see Galena ASX announcement of 28 April 2021.

## Updated Mine Plan – Production metrics<sup>2</sup>

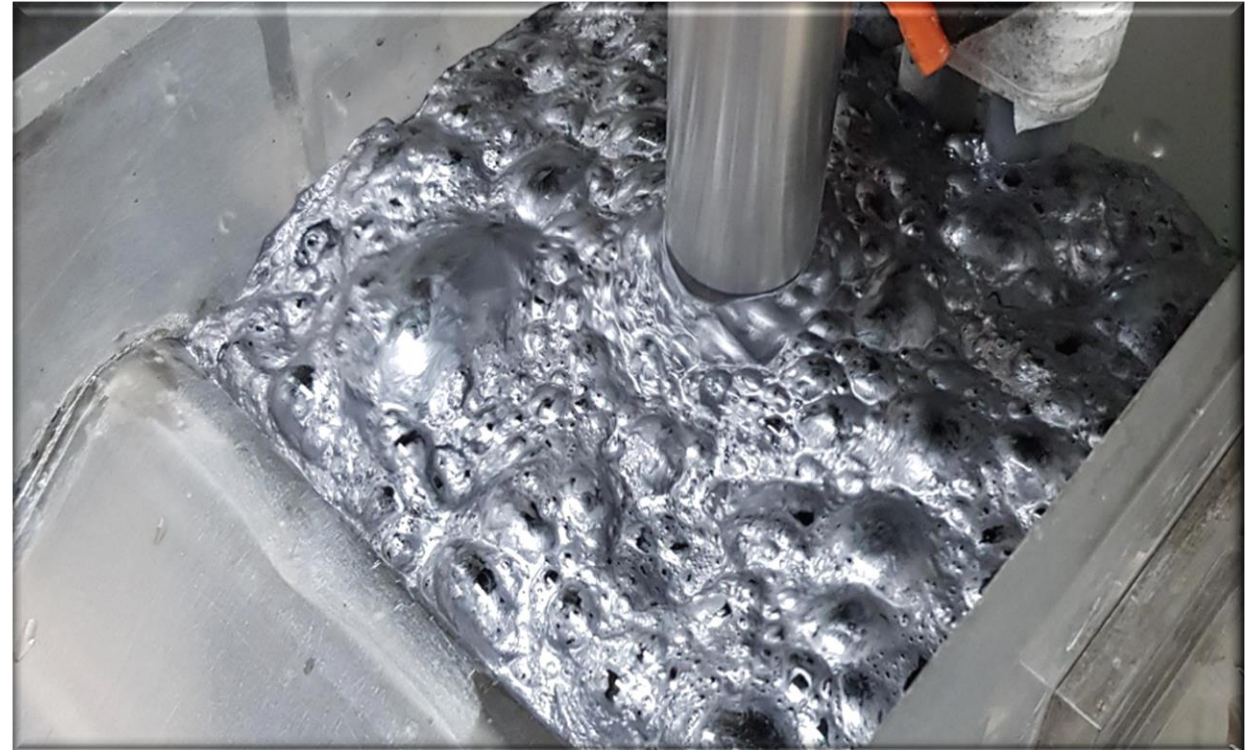
Mill throughput	1.3Mtpa
Initial mine life	13-years
Average LOM lead metal production	93ktpa
Average LOM silver metal production	553kozpa

Notes: 2. For more detail please see Galena ASX announcement of 25 July 2022 (Updated Mine Plan)



## Abra processing and concentrate production

- Metallurgical testing confirms high recoveries – 94% used in FS recovery work.
- Conventional 3-stage crushing, grinding, flotation and filtration.
- Product to be highest grade primary lead concentrate available globally – 75% lead and 80 - 200g/t silver.
- 40% of concentrate production to Toho Zinc on benchmark terms.
- 60% of concentrate being Galena portion committed to IXM under 10-year contract providing a significant premium to benchmark (high quality concentrate).



*Flotation Test Work.*



Thankyou  
[www.galenamining.com.au](http://www.galenamining.com.au)

**Galena Mining Limited**

